

REMARKS

Reconsideration and further examination of the subject patent application in light of the present Amendment and Remarks is respectfully requested. Claims 38-48 are currently pending in the application. Claims 38-48 stand rejected.

Rejections under 35 U.S.C. §102(b)

Claims 38-48 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Pat. No. 5,160,891 to Keran. Applicant respectfully traverses these rejections.

Independent claims 38 and 41 have been further limited to "receiving a plurality of experimental signals within different Larmor frequency ranges from atoms excited by the plurality of generated signals". Support for the addition limitations may be found in the example of oxygen-17 and hydrogen described at the bottom of page 7 to the top of page 8. As discussed, oxygen-17 would have a Larmor frequency in the area of 8.33 MHz at 1.5 Tesla (page 5) and hydrogen has a Larmor frequency of approximately 64 MHz (page 2).

The Examiner asserts that Keran performs the method steps of "exciting a plurality of atoms having different atomic weights with the generated signals (Columns 1 and 3, lines 41-44 and 40-50); receiving a plurality of experimental signals from atoms excited by the generated signals (Figure 1, #12-#16)" (Office Action of 7/29/05, page 2). However, the referenced sections of Keran merely refer to an identical set of processing frequencies used within RF boxes 36-39. For example, "The detail of RF boxes 36-39 are shown in FIG. 2" (Keran, col. 4, lines 28-

29). The "input to the two input mixer 73 is the RF+IF+1.2 MHz signal" (Keran, col. 4, lines 38-39). This RF+IF+1.2 MHz signal is clearly the same signal discussed at col. 3, lines 47-48. The other outputs of 1 MHz, 10 MHz and 100 MHz of the frequency synthesizer 41 (Keran, col. 3, lines 49-50) are provided as inputs to respective mixers 76, 79, 83 of FIG. 2 of Keran.

As such, each RF box 36, 37, 38, 39 receive an identical set of mixing frequencies. The identical sets of mixing frequencies are located at 192.2 MHz, 1 MHz, 10 MHz and 100 MHz.

Since each RF box 36, 37, 38, 39 receives an identical set of mixer frequencies, Keran would necessarily operate within a single Larmor frequency range. In contrast, the claims are limited to experimental signals from different Larmor frequency ranges. Since Keran is limited to a single Larmor frequency range, Keran does not do the same or any similar thing in the same way. Since Keran does not do the same or any similar thing in the same way, the rejections are improper and should be withdrawn.

#### Closing Remarks

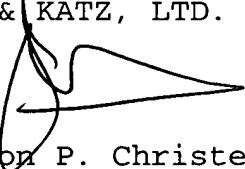
For the foregoing reasons, applicant submits that the subject application is in condition for allowance and earnestly solicits an early Notice of Allowance. Should the Primary Examiner be of the opinion that a telephone conference would expedite prosecution of the subject application, the Primary Examiner is respectfully requested to call the undersigned at the below-listed number.

The Commissioner is hereby authorized to charge any additional fee which may be required for this application under 37 C.F.R. §§ 1.16-1.18, including but not limited to

the issue fee, or credit any overpayment, to Deposit Account No. 23-0920. Should no proper amount be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 23-0920. A duplicate copy of this sheet(s) is enclosed.

Respectfully submitted,  
WELSH & KATZ, LTD.

By

  
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